

**Notice of Allowability**

Application No.

10/051,765

Examiner

Blessing M. Fubara

Applicant(s)

FITZPATRICK ET AL.

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to RCE and IDS filed 02/03/2005.
2. ☒ The allowed claim(s) is/are 36-50,59,60,65-71,75 and 76 (claims are renumbered).
3. ☐ The drawings filed on \_\_\_\_\_ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 02/03/05 and 04/01
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

THURMAN K. PAGE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1600

### **DETAILED ACTION**

Examiner acknowledges receipt of IDS filed 04/01/05 and 02/03/05 and request for continued examination filed 02/03/05. Claims 36-50, 65-71, 75 and 76 are pending.

#### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicants' submission filed on 02/03/05 has been entered.

#### ***Information Disclosure Statement***

2. The information disclosure statement (IDS) submitted on 02/03/05 was filed after the mailing date of the Notice of Allowance on 1/02/04. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the examiner is considering the information disclosure statement.

#### ***Allowable Subject Matter***

3. The following is an examiner's statement of reasons for allowance:

The pending claims are directed to pharmaceutical formulation containing the ionene polymers recited in claims 36, 38, 59 and 67. The pending claims are also directed to treating microbial infection with the compositions that contain the ionene polymers of claims 36, 38, 59 and 67.

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Muramatsu et al. (US 3,988,158) discloses anti-static and anti-foaming agents that are quaternary ammonium containing polymers of the types listed in column 3 line 20 to column 8 line 52. Structures 8, 9 and 10 are the closest repeating units to the repeating units of the instant claims but the repeating units of Muramatsu, though having pyridinium moieties do not have alcohol group containing substituent on any of the pyridinium rings. The ionene polymer of Dominguez et al. (US 5,283,316) do not have repeating units that have pyridinium type monomers as required by the instant claims (see abstract; column 3, lines 62-67; column 4, lines 1-6; column 5, lines 25-53). Tachibana et al. (US 4,898,808) discloses polymeric compound having repeating units of the type in Formula I. However, the closest structure that is encompassed by Formula I (structures I-10) differs from the repeating units of the instant claims because the claims require that the substituent on the pyridinium ring contain one or more alcoholic groups and the repeating unit of the instant claims do not permit aromatic type substitution. Drake et al. (US 5,419,897) discloses ionene polymer and administers the ionene polymer to treat helminth infections (abstract, column 3, lines 44-66). The ionene polymer of Drake does not have pyridinium containing repeating unit. Wang et al. (6,048,679) discloses antistatic polymer having pyridinium type ionene group in the backbone (column 4, line 13-17) and the pyridinium group differs from the pyridinium repeating unit of the instant claims in that the pyridinium nitrogen is not substituted with lower alkylene or lower alkylene glycol group that has two or more alcohol groups.

The references submitted on 02/03/05 and 04/21/05 do not disclose ionene polymer having a repeating pyridinium units as recited in claim 36. Williams et al. (US 4,414,080), for

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example, discloses ionene bipyridyl polymers (column 6, lines 36-65 and columns 7 and 8), which are however different from the ionene polymers depicted in claims 36-41.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Blessing M. Fubara whose telephone number is (571) 272-0594. The examiner can normally be reached on 7 a.m. to 3:30 p.m. (Monday to Friday).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman K. Page can be reached on (571) 272-0602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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